

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

CASE NO. 2005-00341

**GENERAL ADJUSTMENT OF ELECTRIC RATES OF
KENTUCKY POWER COMPANY**

TESTIMONY OF
DAVID H. BROWN KINLOCH

On Behalf of

**THE OFFICE OF THE ATTORNEY GENERAL
FOR THE COMMONWEALTH OF KENTUCKY**

JANUARY 2006

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COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of:

GENERAL ADJUSTMENT OF ELECTRIC)
RATES OF KENTUCKY POWER COMPANY) CASE NO. 2005-00341

TESTIMONY OF DAVID H. BROWN KINLOCH

Q1: PLEASE STATE YOUR NAME AND ADDRESS.

A1: My name is David H. Brown Kinloch and my business address is Soft Energy Associates, 414 S. Wenzel Street, Louisville, KY 40204.

Q2: FOR WHOM HAVE YOU PREPARED TESTIMONY?

A2: I have prepared this testimony for the Office of the Attorney General for the Commonwealth of Kentucky.

Q3: PLEASE STATE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A3: I have received two master's degrees from Rensselaer Polytechnic Institute (RPI) in Troy, New York. I also received two undergraduate degrees from the same school. My master's degrees are a Master of Engineering in Mechanical

1 Engineering and a Master of Science in Science, Technology and Values,
2 received in 1979 and 1981 respectively. My undergraduate degrees are in
3 Mechanical Engineering and Philosophy. Much of my master's work included
4 preparing Electric Generation Planning studies for the Center for Technology
5 Assessment at Rensselaer. From this work I published two technical papers with
6 IEEE Power Generation Division, and was a contributing author on two others. I
7 also did work on New York State's first Energy Masterplan, one of the first
8 comprehensive long-term planning studies in the nation.

9
10 **Q4: HAVE YOU PREVIOUSLY PRESENTED TESTIMONY BEFORE THIS**
11 **COMMISSION?**

12 A4: Yes, I have testified in numerous cases before this Commission. These cases
13 include rate cases, Certificate of Convenience and Public Necessity cases,
14 generation expansion planning cases, and other cases related to regulated utilities.
15 A list of the cases in which I have presented testimony before this Commission is
16 contained in Exhibit DHBK-1.

17
18 **Q5: WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS CASE?**

19 A5: The Office of the Attorney General asked me to review the application to adjust
20 the rates filed by Kentucky Power Company (KPC) in this case. Specifically, I
21 have reviewed the Cost of Service and Rate Design portion of the application. In
22 my testimony, I will point out problems with the Kentucky Power Company
23 application in three specific areas: 1) the Cost of Service Study, 2) the

1 Residential Monthly Customer Charge and Rate Design, and 3) the Miscellaneous
2 Service Charges.

3

4

5 **COST OF SERVICE STUDY**

6

7 **Q6: IN THIS CASE, MR. FOUST FILED A COST OF SERVICE STUDY AS**
8 **PART OF HIS TESTIMONY. WHAT PROBLEMS DO YOU SEE WITH**
9 **THIS STUDY?**

10 **A6:** It is not possible to determine specific problems with the Cost of Service study
11 that was filed by the Company in this case because the study is presented as a
12 “black box,” not subject to examination concerning the treatment of the individual
13 costs that have gone into the totals and results presented. In all cases in which I
14 have previously been involved that have required a Cost of Service study, since
15 the use of personal computers has become prevalent, the utility has produced a
16 Cost of Service study in a spreadsheet form, typically using an EXCEL
17 workbook, with one or more linked worksheets. To check the Cost of Service
18 study and verify the formulas, assumptions, and methodologies, intervenors have
19 requested the study in an electronic format, with all embedded cell formulas left
20 intact. Using this electronic version of the study, intervenors have been able to
21 track costs by formula, from cell to cell, to determine whether calculations were
22 done correctly, to check that costs were allocated properly, and to verify whether
23 the study model followed generally accepted principles and methodologies. If the

1 intervenor found a problem with any part of the study model, formulas and cell
2 references could be changed, to offer the Commission an apples-to-apples
3 comparison, showing the impact of the changes the intervenor recommended as
4 appropriate.

5 In this case, the Attorney General (AG-1-179) and the Kentucky Industrial
6 Utility Customers, Inc. (KIUC) (KIUC-1-92) requested a copy of the Company's
7 Cost of Service Study, in an electronic format. The Company's Response to both
8 requests was made at KIUC-1-92 where the Company supplied, in an electronic
9 format, the inputs it used to produce its Cost of Service Study using the TACOS
10 Gold software package. The outputs from that package were also supplied in an
11 electronic format. The outputs are the same as those that appear in Mr. Foust's
12 Exhibit LCF-1. The problem is that this electronic version of the output, while in
13 an EXCEL spreadsheet, contains simply values in the cells, but the cells have
14 none of the underlying formulas used to create each of the values. Consequently,
15 it is impossible to tell what costs are included in what results and why.

16
17 **Q7: DID THE COMPANY INTENTIONALLY SUPPLY AN ELECTRONIC**
18 **VERSION OF THIS SPREADSHEET, WHERE THE UNDERLYING**
19 **FORMULAS HAD BEEN DELETED?**

20 A7: I don't believe so. When the formulas appeared to be missing or deleted, the
21 Company was informally asked to supply an electronic copy with the underlying
22 formulas left in place. The Company informed the Attorney General that this
23 spreadsheet had no underlying formulas because all calculations were done

1 internally by the TACOS Gold software, a commercial software program which is
2 subject to licensing agreements whose specific internal workings are not known to
3 the company. Therefore, the spreadsheet supplied is simply an electronic version
4 of the output report the software produces. There are no cell formulas and no
5 intermediate calculations that can be viewed. There is no way to accurately trace
6 what underlying costs appear in what totals or how their allocation occurred.

7 To confirm the fact that none of the underlying formula are apparent in the
8 software, the Company has loaned the Attorney General a laptop computer loaded
9 with the TACOS Gold software. I was able to view the input files as provided by
10 the Company in response to KIUC-1-92, see how the output report is generated,
11 and confirm that there is no way to view the intermediate calculations that
12 generate the output report.

13 Use of the TACOS Gold model involves the user supplying a set of inputs,
14 and then pushing the "Calculate" button. The software then does whatever
15 calculations it is programmed to do and produces a report that can be printed with
16 the "Reports" button. This procedure was confirmed by the Company in its
17 response to the Attorney General-2-62.

18 Because the nature of the calculations performed are never available to the
19 user, the TACOS Gold software produces a Cost of Service Study that is a "black
20 box." The user provides inputs, presses a button, and receives an output report.
21 There is no way to find out exactly what calculations are being done or to confirm
22 that the formulas and methodologies that the software is using are acceptable.

1 **Q8: WHILE YOU HAVE BEEN UNABLE TO CHECK AND VERIFY THE**
2 **CALCULATIONS AND METHODOLOGIES CONTAINED IN THE**
3 **TACOS GOLD SOFTWARE, WAS THE COMPANY ABLE TO PROVIDE**
4 **ANY OTHER VERIFICATION OF THE INTERNAL CALCULATIONS**
5 **OF THE SOFTWARE?**

6 A8: No. In the Attorney General's Second Data Request, Items 65 and 66, the
7 Company was asked to provide step-by-step demonstrations of the way that the
8 TACOS Gold software functionalized and classified costs. It was also asked to
9 provide step-by-step calculations that allocated costs in AG-2-71. The Company
10 provided some of the input formulas but was unable to demonstrate the
11 calculations being performed by the TACOS Gold software.

12 It is troubling that given the inability to produce or replicate the
13 calculations performed by the software, it has become clear that the Company
14 itself has not verified the calculations being done inside the TACOS Gold "black
15 box." In response to AG-2- 87, the Company stated that "no formal tests" have
16 been done to verify the calculations done internally within the TACOS Gold
17 software "black box."

18

19 **Q9: COULD YOU PLEASE PROVIDE AN EXAMPLE THAT ILLUSTRATES**
20 **THE PROBLEM OF VERIFYING WHAT CALCULATIONS ARE DONE**
21 **WITHIN THE TACOS GOLD SOFTWARE?**

22 A9: Yes. In a utility rate case, the Attorney General has usually been concerned about
23 the level of the monthly customer charge, especially for residential customers.

1 Utilities will often point to “customer” allocated costs in the Cost of Service
2 Study as justification for a proposed customer charge level. The Attorney
3 General can then use an electronic version of the Cost of Service Study to
4 determine all of the costs that the utility has allocated to the customer charge.
5 This is done by starting with the cell containing the final or total figure, looking at
6 the formula contained in that cell, and thus determining which other cells were
7 used to generate the total. For each of those contributing cells, the formulas in
8 those cells provide the input cells, which then can be checked, and so forth. By
9 tracing back the cell references, all of the costs allocated as “customer” costs can
10 be determined. If costs have been inappropriately allocated to the customer
11 charge, that can be pointed out to the Commission and a revised calculation can
12 be done.

13 In this case, it is not possible to determine all the costs that the Company
14 has included in the proposed residential customer charge. In the Attorney
15 General’s Second Data Request, Item 83, the Company was asked to “provide all
16 calculations, assumptions, and workpapers used to generate the \$8.69 full
17 customer charge” figure. The Company responded, “Please see page 8 of the
18 Company’s response to Commission Staff 1st Set Data Request Item No. 8-c.”
19 The page referenced simply shows a figure of \$14,967,162 divided by 1,723,161
20 bills to produce the \$8.69 per month figure. This response provided none of the
21 calculations, assumptions or workpapers used to generate the \$14,967,162 figure.
22 This figure appears to be from the Cost of Service Study, Foust Exhibit LCF-1,

1 page 10 of 20, at the bottom of the page that lists the residential customer costs as
2 \$14, 960,925.

3 When this residential customer cost figure is viewed in the electronic
4 version of the Cost of Service Study, it is simply a value with no cell references.
5 It is impossible to determine which costs have been included in this total.
6 Consequently, it is impossible to follow the study back to determine how each of
7 the input costs with which the Company started were allocated. This is a serious
8 problem. In all other cases in which I have been involved in the analysis of a Cost
9 of Service study presented by a utility, an investigation back through the cell
10 references has been the only means to determine that inappropriate costs have
11 been included in the customer charge and have inflated this charge.

12 While this is just one example, the same problem exists for all of the
13 figures on the results report that was presented by the Company as a Cost of
14 Service Study in Foust Exhibit LCF-1.

15
16 **Q10: CONSIDERING THAT IT IS NOT POSSIBLE TO DETERMINE WHAT**
17 **CALCULATIONS WERE DONE BY THE TACOS GOLD SOFTWARE**
18 **USED TO GENERATE THE COST OF SERVICE REPORT PRESENTED**
19 **IN FOUST EXHIBIT LCF-1, DO YOU BELIEVE THAT THE**
20 **COMMISSION CAN RELY UPON THIS EXHIBIT TO DETERMINE THE**
21 **REVENUE REQUIREMENTS FOR EACH RATE CLASS?**

22 A10: No. The "black box" nature of the TACOS Gold software used by the Company
23 to generate a Cost of Service report in this case makes it impossible to determine

1 the calculations involved in generating the results report. Without the ability to
2 determine the intermediate calculations done within the TACOS Gold “black
3 box,” it is impossible to know exactly how the results report was generated or to
4 have any confidence in any of the figures in the report.

5 The requirements of a Cost of Service Study in a utility rate case are laid
6 out in the Commission’s regulation in 807 KAR 5:001 Section 10(6)(u). This
7 regulation requires, “a cost of service study based on a methodology generally
8 accepted within the industry and based on current and reliable data from a single
9 time period.” It is impossible to determine if the TACOS Gold software contains
10 “a methodology generally accepted within the industry”, because it is impossible
11 to determine what methodology is used within this “black box” software.

12 Over the many years that I have reviewed many Cost of Service Studies
13 filed by utilities before this Commission, I have never seen a Cost of Service
14 Study filed where calculations are hidden within “black box” software, so that it is
15 not possible to determine those internal calculations. In contrast, all of the Cost of
16 Service Studies I have reviewed since the widespread acceptance of Personal
17 Computers have been done with a spreadsheet program that allows for
18 calculations to be tracked back through the spreadsheet using embedded cell
19 references. Clearly, the use of a Cost of Service Study on a spreadsheet, where
20 calculations can be tracked back and verified is the “methodology generally
21 accepted within the industry.”

22 The Company’s use of a “black box” methodology is clearly not
23 “generally accepted within the industry” as this is the first time, to my knowledge,

1 that a “black box”-generated Cost of Service Study has been filed before this
2 Commission. Based on the fact that none of the calculations or results can be
3 verified, and that the Company has deviated from “a methodology generally
4 accepted within the industry,” the Commission should reject the Cost of Service
5 Study filed by the Company in this case.

6

7 **Q11: HAVE YOU PREPARED AN ALTERNATIVE COST OF SERVICE**
8 **STUDY BASED ON AN INDUSTRY ACCEPTED METHODOLOGY?**

9 A11: No. It was not until I received the Company’s responses to the Attorney
10 General’s Second Data Request on December 22, 2005, that I was able to confirm
11 my suspicion that the calculations done within the TACOS Gold software could
12 not be viewed or verified. By that point, there simply was not enough time to
13 construct a completely new Cost of Service Study from scratch.

14

15 **Q12: WITHOUT A RELIABLE AND VERIFYABLE COST OF SERVICE**
16 **STUDY TO RELY UPON, HOW WOULD YOU SUGGEST THAT THE**
17 **COMMISSION ALLOCATE ANY REVENUE INCREASE APPROVED**
18 **BETWEEN RATE CLASSES?**

19 A12: My recommendation is to allocate any revenue increase based on how the
20 allocation between classes was made in the Company’s last rate case. This case
21 was settled and allocations were made between classes according to a settlement
22 agreement. In Kentucky Power’s last general rate case, Case No. 91-066, *In the*
23 *Matter of; Application of Electric Raters of Kentucky Power Company*, by Order

1 dated October 28, 1991, the class allocations were made between classes based on
2 a list of class percentages, which was attached to the settlement agreement. These
3 are allocations that all the parties agreed were fair, just and reasonable as of that
4 date. Absent a reliable Cost of Service study on which to change the class
5 allocations, they can also be used to allocate between the rate classes in this case.

6 The class allocations accepted by all parties are as follows:

7	<u>Rate Class</u>	<u>Percent of Total</u>
8	RS	32.0819%
9	OL	.7672%
10	SL	.2513%
11	GS Fixed	1.8278%
12	GS Other	12.6400%
13	LGS	15.9467%
14	QP	11.8973%
15	CIP-TOD	22.5150%
16	MW	.2941%
17	IRP	1.7787%

18 Because there is no reliable Cost of Service study on which to change the
19 allocation previously used, I recommend the Commission adopt these same class
20 allocation percentages in this case.

1 **RESIDENTIAL MONTHLY CUSTOMER CHARGE AND RATE DESIGN**

2

3 **Q13: THE COMPANY HAS CALCULATED THE RESIDENTIAL MONTHLY**
4 **CUSTOMER CHARGE TO BE \$8.69 PER MONTH USING THE “BLACK**
5 **BOX” CALCULATIONS WITHIN THE TACOS GOLD SOFTWARE. IS**
6 **THE COMPANY PROPOSING A RESIDENTIAL MONTHLY**
7 **CUSTOMER CHARGE OF \$8.69 PER MONTH?**

8 **A13: Yes and no. While the Company is only proposing to recover \$5.50 per month**
9 **through the Residential monthly customer charge, it is proposing to collect the**
10 **remaining \$3.19 per month through the use of a declining block rate structure.**
11 **The current customer charge is \$4.25 per month, so the proposed increase is 29%.**

12

13 **Q14: DO YOU AGREE THAT THE FULL COST THAT NEEDS TO BE**
14 **RECOVERED FROM RESIDENTIAL CUSTOMERS THROUGH A**
15 **MONTHLY CUSTOMER CHARGE IS \$8.69.**

16 **A14: No. As stated earlier in my testimony, it is not possible to determine what costs**
17 **are included in the \$8.69 figure that is based on results from the TACOS Gold**
18 **“black box” calculations. In an attempt to determine which costs might have been**
19 **included in that total by this software, I have taken the costs that can be directly**
20 **assigned on a customer basis from Foust Exhibit LCF-1, and have totaled them in**
21 **Exhibit DHBK-2. I need to be clear that I am not accepting any figures contained**
22 **in Foust Exhibit LCF-1, because their source cannot be verified, but these figures**

1 are being used in an attempt to determine whether the TACOS Gold software is
2 including inappropriate costs in the customer charge.

3 In Exhibit DHBK-2, where the Company-calculated items that are
4 appropriate for a customer charge are added up, and then divided by the number
5 of monthly residential bills, the full Residential monthly customer cost is
6 calculated to be \$5.86. This is right in line with the \$5.50 charge being proposed
7 by the Company. Based on the Company's figures and my calculations, the
8 proposed \$5.50 Residential monthly customer charge is acceptable, but continued
9 use of a declining block rate for the Residential class cannot be justified. I
10 recommend the Commission accept the \$5.50 Residential monthly charge
11 proposed by the Company, but eliminate the use of a declining block rate
12 structure and instead, implement a flat rate structure for the Residential class.

13

14 **Q15: WHY IS IT APPROPRIATE TO ELIMINATE THE DECLINING BLOCK**
15 **RATE STRUCTURE FOR THE RESIDENTIAL CLASS?**

16 **A15:** The use of declining block rates goes back to an earlier era in the electric power
17 industry when promotional rates were established to encourage the use of electric
18 heat. In a declining block rate, the more power used, the cheaper the rate for each
19 added increment of power used. By making electricity cheaper for increased
20 usage, those customers that chose to add electric heat to their existing electrical
21 load would receive power for this additional use at a reduced rate. Selling
22 additional power at a reduced rate also encourages the waste of energy by sending
23 the wrong pricing signals to consumers. To encourage energy conservation, it is

1 much more appropriate to adopt an inclined block rate where electricity becomes
2 more expensive as usage increases.

3 Kentucky's General Assembly so values conservation that it has
4 encouraged demand side management with KRS 278.285. Kentucky Power has a
5 demand side management program. Declining block rates undo the good done by
6 demand side management programs and conflict directly with the philosophy of
7 having customers pay for reduced usage and conservation through bearing the
8 cost of demand side management programs.

9 In recent years, the Commission has attempted to strike a balance between
10 these two competing goals by adopting flat rates for the Residential customers of
11 most of the utilities in Kentucky. Kentucky Power is one of the last Companies to
12 seek a general rate increases since the enactment of KRS 278.285 with its
13 emphasis on reductions in usage. Since the calculations in Exhibit DHBK-2
14 show that the Residential monthly customer costs are in line with the customer
15 charge being proposed, there is no reason the Commission should not eliminate
16 Residential declining block rates in this case. I encourage the Commission to
17 move Kentucky Power's Residential customers to a flat rate structure.

18

1 **MISCELLANEOUS SERVICE CHARGES**

2

3 **Q16: IN THIS CASE, THE COMPANY HAS PROPOSED RAISING ALL OF**
4 **ITS MISCELLANEOUS SERVICE CHARGES BY SUBSTANTIAL**
5 **AMOUNTS, MOST BETWEEN 200% AND 500%. DO YOU AGREE**
6 **WITH THE PROPOSED CHANGES IN THE CHARGES?**

7 A16: No. Most of the proposed increases in Miscellaneous Service Charges are a clear
8 violation of the principle of Continuity and Gradualism. I recommend that the
9 Commission rely upon the principle of Continuity and Gradualism in establishing
10 Miscellaneous charges in this case. The proposed increases in reconnection
11 charges for non-payment range from 204% to 322%. In the case of the \$100
12 reconnection charge to be assessed for reconnections on Sundays or Holidays, the
13 increases simply fly in the face of reason and seem all but punitive. If a customer
14 has been struggling to come up with the amounts needed to pay the bill owed
15 itself, and is facing disconnection as a result, charging \$100 for a reconnection
16 adds an enormous burden to the financial strain already being experienced.

17

18 **Q17: WHY HAS KENTUCKY POWER PROPOSED SUCH HUGE INCREASES**
19 **IN MISCELLANEOUS CHARGES?**

20 A17: In response to the AG-1-189, Mr. Wagner states that because a settlement was
21 reached in its last rate case, Miscellaneous Service Charges were not raised at that
22 time. This ignores the fact that the by agreeing to the settlement of that case, the

1 Company accepted the Miscellaneous Service Charge levels as fair, just and
2 reasonable.

3

4 **Q18: FOURTEEN YEARS HAVE PASSED SINCE THE COMPANY'S LAST**
5 **RATE CASE WAS SETTLED IN 1991, AND COSTS HAVE RISEN. HAVE**
6 **COSTS RISEN AS MUCH AS THE INCREASE PROPOSED BY THE**
7 **COMPANY FOR MISCELLANEOUS SERVICE CHARGES?**

8 A18 No. Since the settlement of the Company's last rate case, costs have risen about
9 43.8%, according to the Labor Department's Consumer Price Index (CPI). This is
10 far less than the increases of 200% to 500% proposed by the Company for
11 Miscellaneous Service Charges. In setting Miscellaneous Service Charges, the
12 Commission should consider both that the charge levels were acceptable to the
13 Company in the settlement of the last case, and that costs have risen substantially
14 less in the fourteen years since the last case than the percentage by which
15 Kentucky Power proposes to increase the charges.

16 Taking Gradualism and Continuity into account, I recommend that all but
17 one of the Company's Miscellaneous Service Charges be raised by 43.8% in
18 accord with the rise in the Consumer Price Index. I have made these calculations
19 in Exhibit DHBK-3. The one exception is the Bad Check charge, which the
20 Company was already proposing to increase 40%, about the same as the increase
21 in the CPI since the last case. For the Bad Check charge, the Company's
22 proposed charge is acceptable.

23

1 **Q19: DOESN'T YOUR PROPOSED INCREASE OF 43.8% IN THE**
2 **MISCELLANEOUS SERVICE CHARGES ALSO VIOLATE THE**
3 **PRINCIPLE OF CONTINUITY AND GRADUALISM?**

4 A19: Possibly. But I think that the Commission must also consider Mr. Wagner's
5 position that there were no increases agreed to in the last rate case settlement, and
6 that some increases are likely justified. I think a reasonable balance between the
7 tremendous increases proposed by the Company and the principle of Continuity
8 and Gradualism is to increase these charges by the increase in overall costs as
9 measured by the Consumer Price Index since 1991.

10

11 **Q20: DOES THIS CONCLUDE YOUR TESTIMONY?**

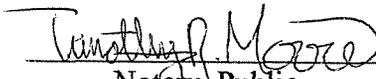
12 A20: Yes it does.

I, David H. Brown Kinloch, certify that the statements contained in the foregoing testimony are true and correct to the best of my knowledge, information, and belief.

Dated this 5th day of January, 2006.


David H. Brown Kinloch

Affirmed to and subscribed
before me, this 5th day
of January, 2006.


Notary Public

My Commission Expires: 7/19/06

Cases in which testimony has been presented by David Brown Kinloch:

Case No. –	Utility -	Case Type
9242	- Louisville Gas & Electric Co.	- Trimble County 1 power plant
9613	- Big Rivers Electric Corp.	- Rate Case
9824	- Louisville Gas & Electric Co.	- Rate Case
9934	- Louisville Gas & Electric Co.	- Trimble County 1 power plant
10064	- Louisville Gas & Electric Co.	- Rate Case
10320	- Louisville Gas & Electric Co.	- 25% Disallowance of Trimble County 1 power plant
90-158	- Louisville Gas & Electric Co.	- Rate Case
91-066	- Kentucky Power Co.	- Rate Case
91-115	- Kentucky Utilities	- Certificate of Convenience and Necessity Case
91-370	- Union Light Heat and Power Co.	- Rate Case
92-112	- East Kentucky Power	- Certificate of Convenience and Necessity Case
92-219	- Clark RECC	- Rate Case
92-346	- Union Light Heat and Power Co.	- Rate Case
93-113	- Kentucky Utilities	- Coal Litigation Refund Case
93-150	- Louisville Gas and Electric Co.	- Demand Side Management Case
93-163	- Big Rivers	- Sale of Peaking Capacity to Hoosier Energy
93-465	- Kentucky Utilities	- Environmental Surcharge Case
94-332	- Louisville Gas and Electric Co.	- Environmental Surcharge Case
94-336	- East Kentucky Power Cooperative	- Rate Case
94-336	- Pass-through each of East Kentucky Power's Cooperatives	
95-010	- Western Kentucky Gas Co.	- Rate Case
96-489	- Kentucky Power Company	- Environmental Surcharge Case
96-523	- Kentucky Utilities	- Fuel Adjustment Clause Case
96-524	- Louisville Gas & Electric Co.	- Fuel Adjustment Clause Case
97-066	- Delta Natural Gas Co.	- Rate Case
97-204	- Big Rivers Electric Corp.	- Rate Case
97-209	- Meade County RECC	- Rate Case
97-219	- Green River EC	- Rate Case
97-220	- Henderson Union ECC	- Rate Case
97-224	- Jackson Purchase ECC	- Rate Case
97-300	- Louisville Gas and Electric and Kentucky Utilities	- Merger Case
98-321	- Licking Valley RECC	- Rate Case
2000-056	- East Kentucky Power	- Certificate of Convenience and Necessity Case
2000-079	- East Kentucky Power	- Certificate of Convenience and Necessity Case
2000-080	- Louisville Gas & Electric Co.	- Rate Case
2000-095	- LG&E Energy and PowerGen	- Merger Case
2000-426	- Union Light, Heat and Power Co.	- Refund Case

Case No. -	Utility -	Case Type
2001-053	East Kentucky Power	Certificate of Convenience and Necessity Case
2002-029	LG&E and KU	Certificate of Convenience and Necessity Case
2003-00030	East Kentucky Power	Certificate of Convenience and Necessity Case
2003-00052	Union Light, Heat and Power Co.	Generation Acquisition Case
2003-00165	Kenergy Corp.	Rate Case
2003-00433	Louisville Gas & Electric Co.	Rate Case
2003-00434	Kentucky Utilities Co.	Rate Case
2004-00067	Delta Natural Gas Co.	Rate Case
2004-00507	Louisville Gas & Electric and Kentucky Utilities	Trimble County 2 power plant
2005-00042	Union Light, Heat and Power Company	Rate Case
2005-00125	Big Sandy Electric Cooperative Corp.	Rate Case
2005-00187	Cumberland Valley Electric	Rate Case

CALCULATION OF RESIDENTIAL MONTHLY CUSTOMER CHARGE

BASED ON FIGURES FROM THE KENTUCKY POWER COST OF SERVICE STUDY

ELECTRIC PLANT IN SERVICE

RB_GUP_EPIS_D	DISTRIBUTION PLANT TOTAL		299,944,584
DEP_RES_DIST_TOTAL_RBD	DISTRIBUTION	RB_GUP_EPIS_D	67,901,463
Portion of Distribution Plant Depreciated			29.31%

SERVICE_RBD	369 SERVICES	DIST_SERV	20,547,459
METER_RBD	370 METERS	DIST_METERS	9,482,984
Customer Charge Plant In Service			30,030,443

DEPRECIATION RESERVE			8,800,692
NUP	NET UTILITY PLANT	FORMULA	21,229,751

PROPOSED RATE OF RETURN - Residential	4.79%	1,015,963
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GROSS REVENUE CONVERSION FACTOR	1.665645
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Revenue Requirements for Customer Charge Net Plant in Service	1,692,234
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OPERATION AND MAINTENANCE EXPENSE

	<u>DISTRIBUTION OPERATION EXPENSE</u>		
OPER_METERS	586 METERS	DIST_METERS	229,771
OPER_CUST_INSTALL	587 CUSTOMER INSTALLS	DIST_PCUST	173,191

	<u>DISTRIBUTION MAINTENANCE EXPENSE</u>		
MAIN_METERS	597 METERS	DIST_METERS	32,004

	<u>CUSTOMER ACCOUNTS</u>		
CUST_ACCT_SUPER	901 SUPERVISION	TOTOX234	376,118
CUST_ACCT_METER_READ	902 METER READ	CUST_902	1,641,348
CUST_ACCT_CUST_RECORDS	903 CUSTOMER RECORDS	CUST_903	4,434,767
CUST_ACCT_UNCOLLECTIBLES	904 UNCOLLECTIBLES	CUST_TOTAL	(13,200)
CUST_ACCT_MISC	905 MISCELLANEOUS	TOTOX234	12,468
EXP_OM_CUSTACCT	TOTAL CUSTOMER ACCOUNTS		6,451,500

CUST_S&I TOTAL	TOTAL CUSTOMER SERVICES	CUST_TOTAL	888,672
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<u>DEPRECIATION EXPENSE</u>			
DEPR_EXP_D	DISTRIBUTION	RB_GUP_EPIS_D	1,061,488

Total Expenses for Customer Charge	8,401,660
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Revenue Requirements for Customer Charge Net Plant in Service	1,692,234
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TOTAL COSTS INCLUDED IN RESIDENTIAL CUSTOMER CHARGE	10,093,894
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Number of Customer Bills	1,723,161
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RESIDENTIAL MONTHLY CUSTOMER CHARGE	\$5.86
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ATTORNEY GENERAL'S PROPOSED MISCELLANEOUS SERVICE CHARGES

Consumer Price Index - November 2005	197.6
Consumer Price Index - October 1991	137.4
Increase in CPI since last KPC Rate Case	1.438137

	Current Rate	KPC Proposed Rate	KPC Proposed % Increase	AG Proposed % Increase	AG Proposed Rate	Test-Year Transactions	AG Proposed Revenues
1 Reconnect for Non-payment - Regular Hours	\$9.00	\$38.00	322%	43.81%	\$12.94	5122	\$66,295
2 Reconnect for Non-payment - Overtime End-of-Day	\$12.00	\$42.00	250%	43.81%	\$17.26	452	\$7,800
3 Reconnect for Non-payment - Call Out	\$25.00	\$76.00	204%	43.81%	\$35.95	305	\$10,966
4 Reconnect for Non-payment - Sundays & Holidays	\$31.00	\$100.00	223%	43.81%	\$44.58	13	\$580
5 Termination of Field Trip	\$6.00	\$23.00	283%	43.81%	\$8.63	16106	\$138,976
6 Returned Check Charge	\$5.00	\$7.00	40%	40%	\$7.00	1722	\$12,054
7 Meter Test Charge	\$10.00	\$69.00	590%	43.81%	\$14.38	3	\$43
TOTAL PROPOSED MISCELLANEOUS REVENUES							\$236,714
TEST-YEAR MISCELLANEOUS REVENUES							\$164,826
AG PROPOSED INCREASE IN MISCELLANEOUS REVENUES							\$71,888